

REMARKS/ARGUMENTS

Claims 1-2 and 4-15 are now present in this application. Claims 1 and 8 are independent claims. Claims 1, 2, 4, 5 and 8 have been amended.

Reconsideration of the application, as amended, is respectfully requested.

CLAIM OBJECTION

Claim 5 stands objected to by the Examiner because "4.0x10¹²" needs a unit such as "ions/cm²."

To overcome the Examiner's objection, Applicants have amended claim 5 to include the unit "ions/cm²", as suggested by the Examiner. Reconsideration and withdrawal of this objection are respectfully requested.

REJECTIONS UNDER 35 U.S.C. § 103

Claims 1-2 and 4-15 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over U.S. Pat. No. 6,372,587 to Cheek et al. (Cheek). This rejection is respectfully traversed.

The Applicants' claimed invention teaches performing the first and second halo implant processes at substantially the same dose by using a tilt angle of about 45° and twist angles of 0° and 180°, respectively, so as to prevent heterogeneous doping of the junction due to the halo implant process.

By contrast, Cheek discloses performing the first and third implant processes at different doses by using different tilt angles, thereby performing non-symmetrical halo implant processes.

The Examiner admits that related art in Cheek discloses halo implant processes being performed at substantially different doses (see paragraph 5 of the Office Action). Particularly, the Examiner states that the first halo implant is performed at a dose in the range of 1.0×10^{12} - 1.0×10^{14} ions/cm², and the third halo implant (so-called by the Examiner) is performed at a dose of 1.0×10^{14} - 1.0×10^{15} ions/cm² (see Cheek, Col.7, lines 28-41).

Clearly, the halo implants of Cheek are not performed at substantially the same dose, but rather, they are performed at substantially different doses. Therefore, Cheek fails to disclose or suggest a combination of elements in a method for forming a junction in a semiconductor device, including said first, second and third halo implant processes being performed at substantially the same dose, as recited in independent claim 1, as amended, and similarly stated in independent claim 8, as amended.

Claim 2 and claims 4-14 depend, either directly or indirectly on independent claims 1 and 8. Since Cheek fails to disclose or suggest the above-recited features of independent claims 1 and 8, Cheek cannot render claims 1-2 and 4-15 obvious to one of ordinary skill in the art. Reconsideration and withdrawal of this art grounds of rejection are respectfully requested.

CONCLUSION

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Percy L. Square, Registration No.51,084, at (703) 205-8034, in the Washington, D.C. area. Prompt and favorable consideration of this Amendment is respectfully requested.

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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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